USER'S MANUAL

SOLAR CHARGE CONTROLLER

⚠ Please connect the battery first, and then connect the solar panel after setting the system parameters. If you do not operate in order, the battery will be damaged
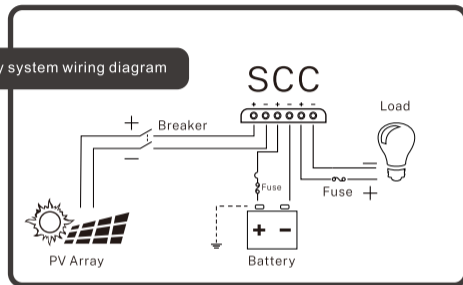
When using lithium batteries, please set the system voltage first, and then set the corresponding battery type (see P7-3.5/P8-3.6).

1.Wiring Instruction

Solar energy system wiring diagram

SCC

Load

+ Breaker

Fuse

Fuse +

PV Array

Battery

※ Perform the following steps to connect cables and install them ※

Step 1
Connect
batteries

Step 2
Connect
the load

Step 3
Connect the
solar panels

NOTICE:

This product is a commonly used positive electrode controller, the positive electrode of the photovoltaic array, battery and load can be grounded at the same time.(In special circumstances, the negative pole of the battery can also be grounded, but in this case the negative pole of the photovoltaic terminal and the negative pole of the load terminal cannot be grounded.)

NOTICE:

If the inverter or other starting current is loaded in the system,please connect the inverter directly to the battery. Do not connect with the controller's load terminal
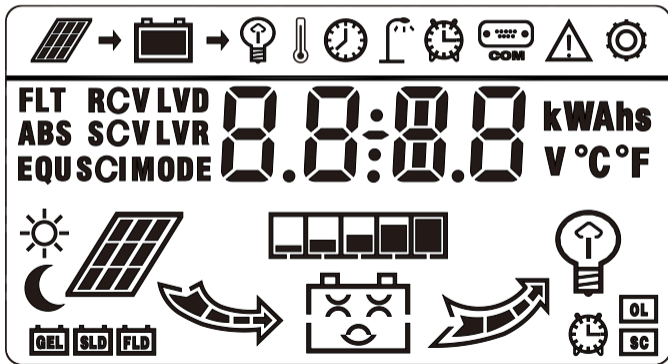
NOTICE:

If a lithium battery is used, set the system voltage and then the battery type before use. (See P7-3.5 / P8-3.6)

3.1 LCD Screen

3.2 Icon meaning

Icon	Meaning	Icon	Meaning	Icon	Meaning
☀🔲	Day	🔲→📥	Data Relates to Charging	**FLT**	Float Charging
🔲	Night	📥→💡	Data Relates to Discharging	**ABS**	Absorption Charging
🔋	Charging	📥 🌡	Data Relates to Temperature	**EQU**	Equalization voltage
🔋	No Charging	⚙	Data Adjustable	**SCI**	Lithium terminates charging current
🔋	Load On	⚠ ⚙	Data not Adjustable	**RCV**	Recovery Charging Voltage
🔋	Load Off	SLD	Sealed Battery	**SCV**	Constant Charging Voltage
🔋	System Works Normally	GEL	GEL Battery	**LVD**	Low Voltage Disconnection Voltage
🔋	System Works Abnormally	FLD	Flooded Battery	**LVR**	Low Voltage Re-connection Voltage

3.3 Button definition

Button meaning	Button symbol	Button function
MENU	**+**	Long press to enter or save settings, short press to turn the page or increment the value.
SET	**–**	Short press to turn the page or decrement the data; Tap on the home screen to enable or disable the load; Long press in the setting state to exit without saving; On the temperature screen, hold down to restore the default parameter values of the current battery type.

3.4 Main loop pages

1-Current battery voltage (Main interface)	**2**-Ambient temperature	**3**-Charging voltage	**4**-Charging current
8-Load mode 1 segment	**7**-Accumulated discharge	**6**-Discharge current	**5**-Accumulated charge
9-Load mode 2 segment	**10**-System voltage	**11**-Battery type	**12**-Floating charge voltage
16-Low voltage recovery voltage	**15**-Low voltage protection voltage	**14**-Equalization voltage	**13**-Absorption voltage

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3.5 System voltage setting

10-System voltage · Automatic recognition voltage · Battery voltage 12V · Battery voltage 24V

Lithium batteries must be manually set to a fixed voltage,

Battery voltage 48V · Battery voltage 36V

※ 36V is not automatically identified and must be set to a fixed system voltage.
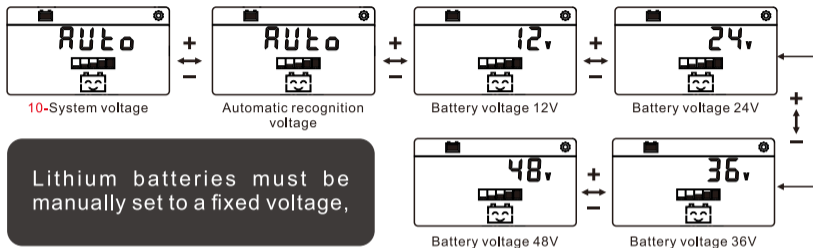
Press "+" on the home screen to switch to the screen (10), hold down the "+" key to enter settings, select the corresponding battery voltage, and hold down the + key to save the settings.

3.6 Battery type setting

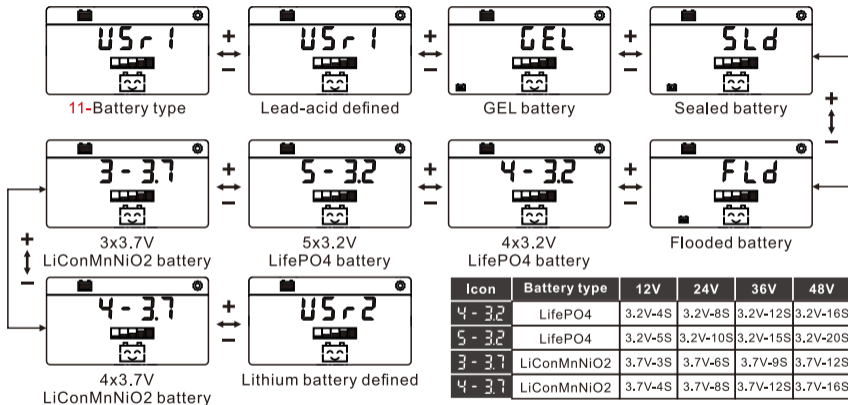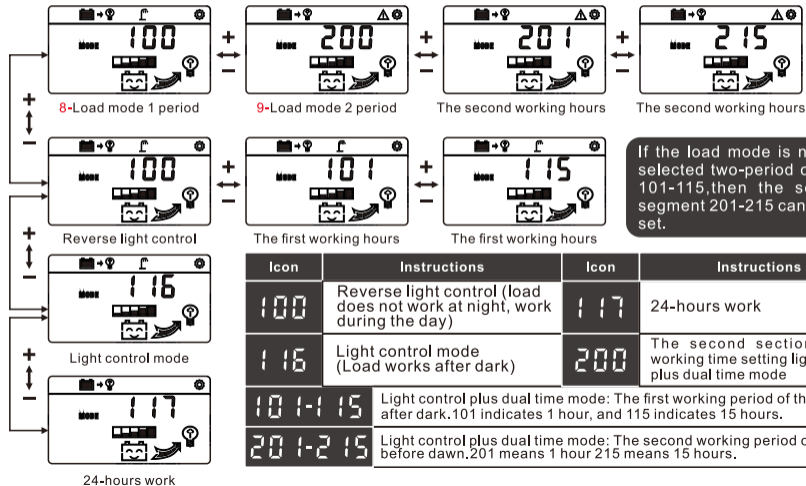|			
USr1	USr1	GEL	SLd
11-Battery type	Lead-acid defined	GEL battery	Sealed battery

3 - 3.7	5 - 3.2	4 - 3.2	FLd
3x3.7V LiConMnNiO2 battery	5x3.2V LifePO4 battery	4x3.2V LifePO4 battery	Flooded battery

4 - 3.7	USr2
4x3.7V LiConMnNiO2 battery	Lithium battery defined

Icon	Battery type	12V	24V	36V	48V
4 - 3.2	LifePO4	3.2V-4S	3.2V-8S	3.2V-12S	3.2V-16S
5 - 3.2	LifePO4	3.2V-5S	3.2V-10S	3.2V-15S	3.2V-20S
3 - 3.7	LiConMnNiO2	3.7V-3S	3.7V-6S	3.7V-9S	3.7V-12S
4 - 3.7	LiConMnNiO2	3.7V-4S	3.7V-8S	3.7V-12S	3.7V-16S

Press + on the home screen to switch to the screen (11), hold down "+" to enter settings, select the corresponding battery type, and hold down "+" to save the settings.

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4.Load working modes

8-Load mode 1 period

9-Load mode 2 period

The second working hours

The second working hours

Reverse light control

The first working hours

The first working hours

If the load mode is not the selected two-period control 101-115,then the second segment 201-215 cannot be set.

Light control mode

24-hours work

Icon	Instructions	Icon	Instructions
100	Reverse light control (load does not work at night, work during the day)	117	24-hours work
116	Light control mode (Load works after dark)	200	The second section of the working time setting light control plus dual time mode
101-115	Light control plus dual time mode: The first working period of the load after dark.101 indicates 1 hour, and 115 indicates 15 hours.		
201-215	Light control plus dual time mode: The second working period of the load before dawn.201 means 1 hour 215 means 15 hours.		

Error Code	Cause	Solution
Ex1	Battery undervoltage	Undervoltage protection, load off Battery overvoltage
Ex2	Battery overvoltage	Overvoltage protection, load off, charging stop
Ex3	Overload protection	Check the load wiring, or reduce the load device
Ex5	Overheating protection	Controller internal overheat protection,charging stopped, automatic recovery after cooling
Ex6	Overcurrent protection	Charging overcurrent protection,rated current +2A,60 second prtection;1.25 times,5-second protection;Automatic recovery in 2 minutes

"E" stands for "Error";
"X" indicates the number of errors. If there are multiple errors, press "+" or "-" to check the loop.
"1-6" indicates the code name.

6.Technical parameter

Max Current	10A	20A	30A	40A	50A	60A	80A
Rated discharge current	10A	20A	30A	30A	30A	30A	40A
Battery Voltage	12V/24V/48V Auto. (36V)						
Max PV Open Circuit Voltage	100V						
Self-consumption	≤30mA						
Loop Voltage Drop	≤0.3V						
USB Output	5V						
Temperature Compensation	-4mV/℃/2V (25℃)						
Operating Temperature	-20℃~+50℃						
Protection Category	IP30						
Humidity	95%, no-condensing						
Terminals	8AWG/10mm2		6AWG/16mm2		4AWG/25mm2		

2.Click "+" to search for products

Scan the QR code to download the APP

1.Select the Device Search screen

Above 40A(including 40A)is equipped with Bluetooth function